

NEW SPECIES AND COMBINATIONS IN
MEXICAN *VIGUIERA*
(ASTERACEAE-HELIANTHEAE)

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ABSTRACT

Two new species of *Viguiera* are described: *V. gentryi* B. Turner from Sonora, México and *V. torresii* B. Turner from Guerrero, México. The former belongs to the sect. *Leighia* of *Viguiera*; the latter belongs to the *Rhysolepis* group (close to *V. morelensis*). In addition, three new varietal combinations are made: *V. eriophora* var. *poblano* (Panero & Schilling) B. Turner, *V. excelsa* var. *pachycephala* (DC) B. Turner, *V. multiflora* var. *macrocephala* (Heiser) B. Turner; and one new variety is proposed: *V. pinnatilobata* var. *megaphylla* Buterwick ex B. Turner.

KEY WORDS: *Viguiera*, Asteraceae, systematics, México.

A treatment of the Asteraceae for México (Turner & Nesom, in prep.) has prompted description of the following new taxa and nomenclatural changes.

Viguiera torresii B. Turner, sp. nov., Figure 1. TYPE: MÉXICO, Guerrero: 20.1 km E Petlaltina (68.1 km E of Chilapa on the road to Tlapa); ca 170 m; "triparia en bosque de encino," 14 Nov 1982, *R. Torres C. 1897* [with E. Martínez S., P. Tenorio L. & C. Romero de T.] (holotype TEX!; isotype MEXU).

V. morelensi Greenm. similis sed foliis majoribus sine nervatura reticulata in paginis inferis et capitulis majoribus in pedunculis ultimis multo longioribus differt.

Suffruticose perennial herb to 1 m high. Stems stiffly erect, densely puberulent. Leaves alternate, gradually reduced upwards, those at mid-stem mostly 8-10 cm long, 3-4 cm wide; petioles 5-15 mm long, the blade tapering upon the petiole forming a narrow wing; blades ovate, 3-nervate from or near the base, moderately pubescent above with harsh, broad-based hispid hairs, the lower surface densely soft pubescent with mostly puberulent hairs,

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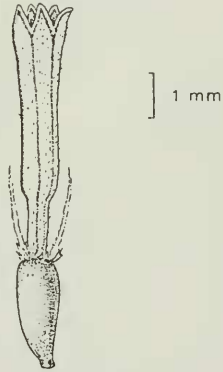
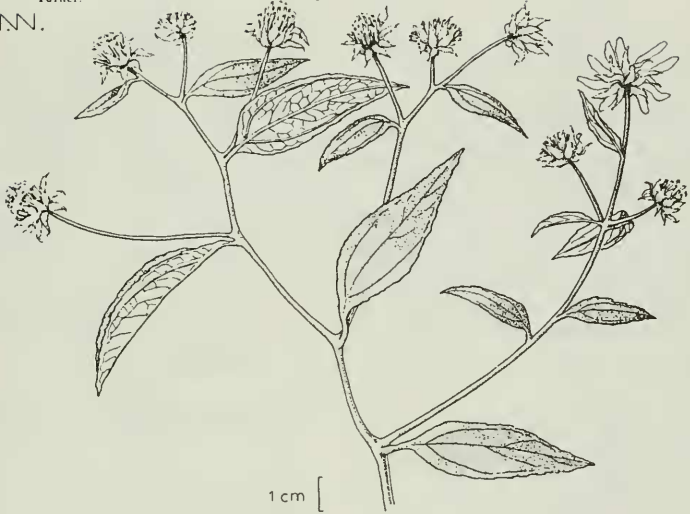


Fig 1 *Viguiera torresii*, from holotype

the margins serrulate. Heads radiate, 3.0-3.5 cm across the expanded rays, arranged 7-10 in lax terminal corymbose panicles, the ultimate peduncles 2-7 cm long. Involucres 3-4 seriate, campanulate, the bracts linear lanceolate with acute apices, graduate, the inner series quite loose and ciliate, usually reflexed for 3-6 mm at the apices. Receptacle convex, paleate, the pales sclerose, tightly investing the achenes, somewhat trifid at the apices. Ray florets ca 13, neuter, sterile; ligules ca 12 mm long, yellow. Disk florets numerous (60+); corollas ca 6 mm long, the tube ca 1.5 mm long, gradually merging into a tubular limb ca 4.5 mm long, the lobes ca 1 mm long. Achenes black, radially flattened, glabrous, ca 2.5 mm long, 1 mm wide, the pappus of 2 readily deciduous awns, 1.0-1.5 mm long, and 3-4 pairs of short lacerate deciduous scales ca 0.1 mm long.

The species is closely related to *V. morelensis* but the leaves are larger and not especially reticulate veined beneath, while the heads are larger on much longer ultimate peduncles.

It is a pleasure to name the species for the principal collector of the type material, R. Torres C., who has added a number of notable species to the Mexican flora.

Viguiera gentryi B. Turner, sp. nov., Figure 2. TYPE: MÉXICO, Sonora: Río Mayo, Sapopa Canyon, "Upper Sonoran; oak slope," 8 Feb 1935, H.S. Gentry 1288 (holotype TEX!; isotypes F,LL!,TEX!).

V. montanae Rose similis sed involucris stramineis multo majoribus (10-16 mm altis, 8-12 mm latis) bracteis 7-9 seriatis (vs. 5-7 seriatis) differt.

Stiffly erect suffruticose perennial (?) to 1 m high. Leaves mostly opposite, rarely alternate along the uppermost branches, 8-14 cm long, 1-3 cm wide, sessile or nearly so; blades lanceolate, 7-9 times as long as wide, strongly trinervate from the base, sparsely appressed strigose above and below, the lower surface also minutely atomiferous glandular, the margins serrulate to nearly entire. Heads 1-5 in a stiffly branched terminal capitulescence, the ultimate peduncles mostly 3-10 cm long, a few much reduced alternate leaves along the peduncles. Involucres decidedly turbinate, straw colored, 10-16 mm long, 8-12 mm wide, the bracts neatly and evenly graduate in 7-9 series, their surfaces glabrous, their apices broadly obtuse or rounded, markedly ciliate with silky white hairs. Ray florets 11-13, neuter, sterile, the ligules narrow, yellow, 10-14 mm long. Disk florets 25-35, the corollas yellow, hispidulous, ca 5 mm long, the tube ca 1 mm long. Achenes 5-6 mm long, appressed silky pubescent, the pappus of 2 more or less equal awns, 3-4 mm long, between these, 4-8 lacerate scales 1.0-1.5 mm long.

This is a very distinctive species what with its large, straw colored, 7-9 seriate, broadly turbinate involucres. It is apparently related to *V. montana*

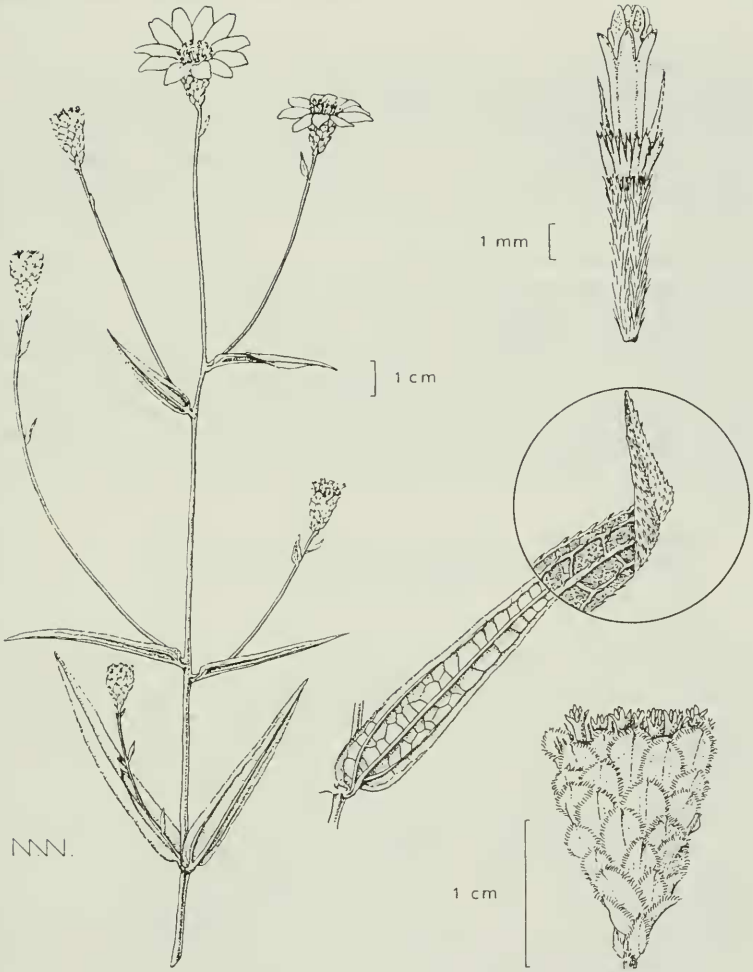


Fig 1. *Viguiera gentryi*, from holotype

which Blake (1918) places in the small sect. *Leighia*.

According to label data, the vernacular name is "Ariosa" (Mexican) or "Wacho-mo" (Indian); it also notes that "Medic. women put leaves on the stomach to cause menses flow. . ." The collector describes the plant as an annual 2-3 feet high, but I suspect the plant is a perennial, to judge from its appearance.

Viguiera excelsa var. *pachycephala* (DC) B. Turner, comb. nov. Based upon *Tithonia pachycephala* DC, Prod. 5:585. 1836.

Blake (1918) distinguished *V. excelsa* (Willd.) Benth. & Hook. from *V. pachycephala* (DC) Hemsl. largely by leaf pubescence, the former being pubescent along most of the veins and upon the surface, the latter pubescent along the larger nerves and veins. I cannot distinguish two species. The type of *V. excelsa* is from the Federal District of México; the type of *V. pachycephala* is from Guanajuato City, Guanajuato. I distinguish between the two varieties as follows:

1. Heads mostly 7-15 cm across the extended rays; mostly Pacific slopes and western Central Plateau (Zac, Nay, Jal, Gua, Mic) var. *pachycephala*
1. Heads mostly 4-7 cm across the extended rays; mostly Central Plateau (San, Gua, Mex, Pue) var. *excelsa*

The two varieties appear to intergrade along their regions of contact. Blake (1918) recognized yet two other varieties of *V. excelsa*: var. *dilatatifolia* Blake from San Luis Potosí and var. *megacephala* (Robins. & Greenm.) Blake from Guerrero. I include the former within my concept of var. *excelsa*; the latter is accepted as a good taxon.

It should also be noted that Blake (1918) recognized *V. pachycephala* var. *simulans* (Robins. & Greenm.) Blake, which appears to be synonymous with *V. hypochlora* (Blake) Blake as noted by McVaugh (1984, p. 1059).

Viguiera eriophora var. *poblano* (Panero & Schilling) B. Turner, comb. nov. Based upon *Viguiera eriophora* subsp. *poblano* Panero & Schilling, Syst. Bot. 13:389. 1988.

In our forthcoming treatment of the Asteraceae of México, all meaningful infraspecific morphogeographic segregates will be recognized as varieties.

Viguiera multiflora var. *macrocephala* (Heiser) B. Turner, comb. nov. Based upon *Heliomeris multiflora* var. *macrocephala* Heiser, Indiana Acad. Sci. 88:364. 1979.

The above combination is necessary since Heiser in Yates & Heiser (1979) recognized Blake's sect. *Heliomeris* as a distinct genus, as does H. Robinson (1981). I prefer Blake's broad circumscription of the genus.

Viguiera pinnatiloba (Schultz-Bip.) Blake var. *megaphylla* Butterwick ex Turner, var. nov. TYPE: MÉXICO, Oaxaca: 20 mi NW of Nejapa, dry subtropical deciduous low forests, 4300 ft, 30 Oct 1965, A. Cronquist & M. Sousa 10448 (holotype LL!; isotypes GH, MICH, NY, US).

V. pinnatilobae (Schultz-Bip.) S.F. Blake arcte similis sed foliis majoribus (7-12 mm longis) quasi integris, marginibus tantum sinuatis differt.

Additional collections examined: Oaxaca: hills at El Chacal, 28 km SE Totolapan, ca 750 m, 8 Oct 1974, Cronquist & Becker 11224 (LL); 11 km E Totolapan, ca 1100 m, 4 Oct 1974, Cronquist & Becker 11214 (LL); 30 mi N Oaxaca, 25 Dec 1969, Whiffen & Rodriguez 231 (TEX).

Butterwick (1975) knew this taxon only by the holotype; since her work, 3 additional collections (cited above) have been made in the region about the city of Oaxaca, and all display the characters which she called to fore.

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